



834

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**R-F POWER AMPLIFIER**

Filament	Thoriated Tungsten	
Voltage	7.5	a-c or d-c volts
Current	3.1	amp.
Amplification Factor	10.5	
Direct Interelectrode Capacitances:		
Grid to Plate	2.6	$\mu\text{mf}$
Grid to Filament	2.2	$\mu\text{mf}$
Plate to Filament	0.6	$\mu\text{mf}$
Maximum Overall Length		6-7/8"
Maximum Diameter		2-11/16"
Bulb		S-21
Base		Medium 4-Pin, Bayonet
RCA Socket (Type UR-542A)		Stock No. 9919
Cooling- Forced air from fan directed at middle and upper portions of bulb is recommended for all classes of service above 60 Mc.		

*Maximum Ratings Are Absolute Values***MAXIMUM RATINGS and TYPICAL OPERATING CONDITIONS****R-F POWER AMPLIFIER-Class B Telephony***Carrier conditions per tube for use with a max. modulation factor of 1.0*

D-C Plate Voltage	1250 max.	volts
D-C Plate Current	100 max.	ma.
Plate Input	75 max.	watts
Plate Dissipation	50 max.	watts

**Typical Operation:**

D-C Plate Voltage	750	1000	1250	volts
D-C Grid Voltage *	-70	-90	-115	volts
Peak R-F Grid Voltage	90	100	115	volts
D-C Plate Current	50	50	50	ma.
D-C Grid Current **	1.0	0.5	0 approx.	ma.
Driving Power ° **	3.3	3.1	3.0 approx.	watts
Power Output	11	16	20 approx.	watts

**PLATE-MODULATED R-F POWER AMPLIFIER-Class C Telephony***Carrier conditions per tube for use with a max. modulation factor of 1.0*

D-C Plate Voltage	1000 max.	volts
D-C Grid Voltage	-400 max.	volts
D-C Plate Current	100 max.	ma.
D-C Grid Current	20 max.	ma.
Plate Input	100 max.	watts
Plate Dissipation	35 max.	watts

**Typical Operation:**

D-C Plate Voltage	750	1000	volts
D-C Grid Voltage *	{ 14500	17700	ohms
	-290	-310	volts
Peak R-F Grid Voltage	415	435	volts
D-C Plate Current	90	90	ma.
D-C Grid Current **	20	17.5 approx.	ma.
Driving Power **	7.5	6.5 approx.	watts
Power Output	42	58 approx.	watts

\* Obtained by grid-leak resistor or by partial self-bias methods.

° At crest of a-f cycle with modulation factor of 1.0.

\*\*, #: See next page.

← Indicates a change.

Dec. 1, 1942

RCA RADOTRON DIVISION  
RCA MANUFACTURING COMPANY, INC.

DATA

# R-F POWER AMPLIFIER

(continued from preceding page)

## R-F POWER AMPLIFIER & OSCILLATOR—Class C Telegraphy

Key-down conditions per tube without modulation\*\*

D-C Plate Voltage	1250 max.	volts
D-C Grid Voltage	-400 max.	volts
D-C Plate Current	100 max.	ma.
D-C Grid Current	20 max.	ma.
Plate Input	125 max.	watts
Plate Dissipation	50 max.	watts

## Typical Operation:

D-C Plate Voltage	750	1000	1250	volts
D-C Grid Voltage †	{ -175	-200	-225	volts
	{ 8750	11400	15000	ohms
	{ 1600	1850	2150	ohms
Peak R-F Grid Voltage	300	325	350	volts
D-C Plate Current	90	90	90	ma.
D-C Grid Current **	20	17.5	15 approx.	ma.
Driving Power **	5.5	5.0	4.5 approx.	watts
Power Output	42	58	75 approx.	watts

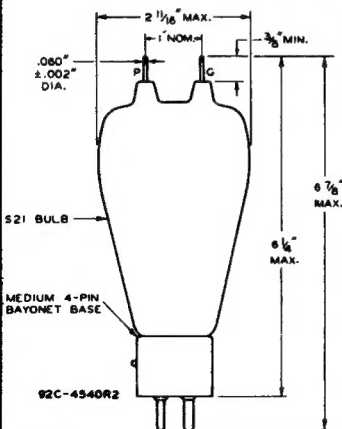
# For a-c filament supply. If d.c. is used, the stated voltage values should be decreased by approx. one-half of the rated filament voltage.

† Obtained from fixed supply, by grid resistor (8750, 11400, 15000), or cathode resistor (1600, 1850, 2150).

\*\* Modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed 115% of the carrier conditions.

\*\* Subject to wide variations as explained on sheet TRANS. TUBE RATINGS.

Data on operating frequencies for the 834 are given on the sheet TRANS. TUBE RATINGS vs FREQUENCY. See also "Cooling" under this type.

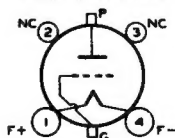


NOTE: Connections to tips P and G should be made by means of radiating connectors to which flexible circuit leads should be clamped.

## TUBE MOUNTING POSITION

VERTICAL: Base down.  
HORIZONTAL: No.

## BOTTOM VIEW OF SOCKET CONNECTIONS



Pin 1—Filament +  
Pin 2—No Connection  
Pin 3—No Connection  
Pin 4—Filament -  
P—Plate  
G—Grid

← Indicates a change.

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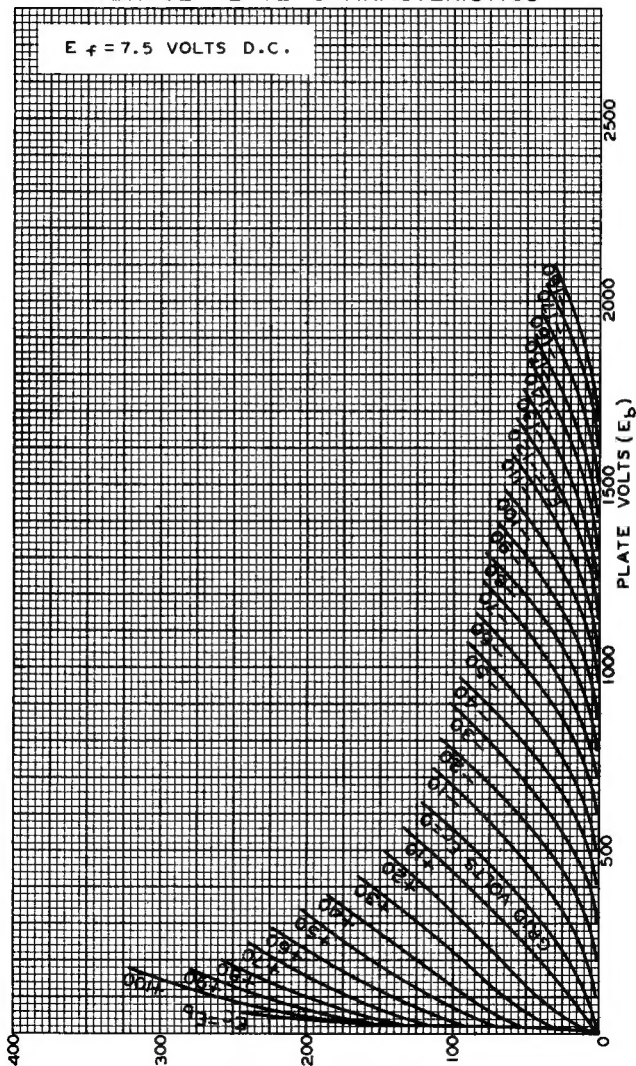
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## AVERAGE PLATE CHARACTERISTICS

 $E_f = 7.5$  VOLTS D.C.

JAN. 21, 1936

PLATE MILLIAMPERES

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92C-4544